

# **EXHIBIT C**



## 5717 PVC

Low VOC SOLVENT CEMENT FOR PVC PLASTIC PIPE

## SECTION 1 – PRODUCT &amp; COMPANY IDENTIFICATION

**PRODUCT NAME:** PRO-WELD 317 Low VOC Solvent Cement for PVC Plastic Pipe**SUPPLIER:** MPS ADHESIVES**EMERGENCY:** Transportation: CHEMTEL Tel. 800.255-3924, 813-248-0585 (International)**PRODUCT USE:** Solvent Cement for PVC Plastic Pipe**ADDRESS:** 1 Day Lane, Carpentersville, IL 60110, USA.**MEDICAL:** Tel. 800.451.8346, 760.602.8703 3E Company (International)

## SECTION 2 – HAZARDOUS IDENTIFICATION

## GHS CLASSIFICATION:

## Health

Acute Toxicity: Category 4

Skin Irritation: Category 3

Skin Sensitization: NO

Eye: Category 2

## Environmental

Acute Toxicity: None Known

Chronic Toxicity: None Known

## Physical

Flammable Liquid: Category 2

## GHS LABEL:



Single Word: Danger

**WHMIS CLASSIFICATION:** CLASS B, DIVISION 2  
CLASS D, DIVISION 1BHazard Statements

H225: Highly flammable liquid and vapor

H319: Causes serious eye irritation

H335: May cause respiratory irritation

H336: May cause drowsiness or dizziness

H351: Suspected of causing cancer

EUH019: May form explosive peroxides

Precautionary Statements

P210: Keep away from heat/sparks/open flames/hot surfaces – No smoking

P261: Avoid breathing dust/fume/gas/mist/vapors/spray

P280: Wear protective gloves/protective clothing/eye protection/face protection

P337+P313: Get medical advice/attention

P403+P233: Store in a well ventilated place. Keep container tightly closed

P501: Dispose of contents/container in accordance with local regulation

## SECTION 3 – COMPOSITION / INFORMATION ON INGREDIENTS

INGREDIENTS	CAS#	EINECS #	REACH Pre-registration Number	CONCENTRATION % by Weight
Tetrahydrofuran (THF)	109-99-9	203-726-8	05-2116297729-22-0000	25 – 70
Methyl Ethyl Ketone (MEK)	78-93-3	201-159-0	05-2116297728-24-0000	5 – 36
Cyclohexanone	108-94-1	203-631-1	05-2116297718-25-0000	10 – 25

All of the constituents of this adhesive product are listed on the TSCA inventory of chemical substances maintained by the US EPA, or are exempt from that listing.

\* Indicates this chemical is subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (40CFR372).

# indicates that this chemical is found on Proposition 65's List of chemicals known to the State of California to cause cancer or reproductive toxicity.

## SECTION 4 – FIRST AID MEASURES

<b>Contact with eyes:</b>	Flush eyes immediately with plenty of water for 15 minutes and seek medical advice immediately.
<b>Skin contact:</b>	Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water. If irritation develops, seek medical advice.
<b>Inhalation:</b>	Remove to fresh air. If breathing is stopped, give artificial respiration. If breathing is difficult, give oxygen. Seek medical advice.
<b>Ingestion:</b>	Rinse mouth with water. Give 1 or 2 glasses of water or milk to dilute. Do not induce vomiting. Seek medical advice immediately.
<b>Likely Routes of Exposure:</b>	Inhalation, Eye and Skin Contact
<b>Acute symptoms and effects:</b>	
<b>Inhalation:</b>	Severe overexposure may result in nausea, dizziness, headache. Can cause drowsiness, irritation of eyes and nasal passages.
<b>Eye Contact:</b>	Vapors slightly uncomfortable. Overexposure may result in severe eye injury with corneal or conjunctival inflammation on contact with the liquid.
<b>Skin Contact:</b>	Liquid contact may remove natural skin oils resulting in skin irritation. Dermatitis may occur with prolonged contact.
<b>Ingestion:</b>	May cause nausea, vomiting, diarrhea and mental sluggishness.
<b>Chronic (long-term) effects:</b>	Category 2 Carcinogen

## SECTION 5 – FIREFIGHTING MEASURES

**Suitable Extinguishing Media:** Dry chemical powder, carbon dioxide gas, foam, Halon, water fog.**Unsuitable Extinguishing Media:** Water spray or stream.**Exposure Hazards:** Inhalation and dermal contact**Combustion Products:** Oxides of carbon and smoke**Protection for Fire fighters:** Self-contained breathing apparatus or full-face positive pressure airline masks.

	HMIS	NFPA	
Health	2	2	0-Minimal
Flammability	3	3	1-Slight
Reactivity	0	0	2-Moderate
PPE	B		3-Serious
			4-Severe

## SECTION 6 – ACCIDENTAL RELEASE MEASURES

<b>Personal precautions:</b>	Keep away from heat, sparks and open flame. Provide sufficient ventilation, use explosion-proof exhaust ventilation equipment or wear suitable respiratory protective equipment. Prevent contact with skin or eyes (see section 8).
<b>Environmental Precautions:</b>	Prevent product or liquids contaminated with product from entering sewers, drains, soil or open water course.
<b>Methods for Cleaning up:</b>	Clean up with sand or other inert absorbent material. Transfer to a closable steel vessel.
<b>Materials not to be used for clean up:</b>	Aluminium or plastic containers



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**SECTION 7 – HANDLING AND STORAGE**

- Handling:** Avoid breathing of vapor, avoid contact with eyes, skin and clothing. Keep away from ignition sources, use only electrically grounded handling equipment and ensure adequate ventilation/fume exhaust hoods. Do not eat, drink or smoke while handling.
- Storage:** Store in ventilated room or shade below 44°C (110°F) and away from direct sunlight. Keep away from ignition sources and incompatible materials: caustics, ammonia, inorganic acids, chlorinated compounds, strong oxidizers and isocyanates. Follow all precautionary information on container label, product bulletins and solvent cementing literature.

**SECTION 8 - PRECAUTIONS TO CONTROL EXPOSURE / PERSONAL PROTECTION**

	Component	ACGIH TLV	ACGIH STEL	OSHA PEL	OSHA STEL	OSHA PEL-Ceiling	CAL/OSH A PEL	CAL/OSHA Ceiling	CAL/OSH A STEL
EXPOSURE LIMITS:	Tetrahydrofuran (THF)	50 ppm	100 ppm	200 ppm	N/E	N/E	200 ppm	N/E	250 ppm
	Methyl Ethyl Ketone (MEK)	200 ppm	300 ppm	200 ppm	N/E	N/E	200 ppm	N/E	300 ppm
	Cyclohexanone	20 ppm	50 ppm	50 ppm	N/E	N/E	25 ppm	N/E	N/E
Engineering Controls:	Use local exhaust as needed.								
Monitoring:	Maintain breathing zone airborne concentrations below exposure limits.								
Personal Protective Equipment (PPE):									
Eye Protection:	Avoid contact with eyes, wear splash-proof chemical goggles, face shield, safety glasses (spectacles) with brow guards and side shields, etc. as may be appropriate for the exposure.								
Skin Protection:	Prevent contact with the skin as much as possible. Butyl rubber gloves should be used for frequent immersion. Use of solvent-resistant gloves or solvent-resistant barrier cream should provide adequate protection when normal adhesive application practices and procedures are used for making structural bonds.								
Respiratory Protection:	Prevent inhalation of the solvents. Use in a well-ventilated room. Open doors and/or windows to ensure airflow and air changes. Use local exhaust ventilation to remove airborne contaminants from employee breathing zone and to keep contaminants below levels listed above. With normal use, the Exposure Limit Value will not usually be reached. When limits approached, use respiratory protection equipment.								

**SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES**

<b>Appearance:</b>	Gray or clear, heavy syrupy liquid			<b>Odor Threshold:</b>	0.88 ppm (Cyclohexanone)		
<b>Odor:</b>	Ketone			<b>Boiling Range:</b>	66°C (151°F) to 156°C (313°F)		
<b>pH:</b>	Not Applicable			<b>Evaporation Rate:</b>	>1.0 (BUAC = 1)		
<b>Melting/Freezing Point:</b>	-108.5°C (-163.3°F) Based on first melting component: THF			<b>Flammability:</b>	Category 2		
<b>Boiling Point:</b>	56°C (133°F) Based on first boiling component: THF			<b>Flammability Limits:</b>	<b>LEL:</b> 1.1% based on Cyclohexanone <b>UEL:</b> 11.8% based on THF		
<b>Flash Point:</b>	-20°C (-4°F) T.C.C. based on THF			<b>Vapor Pressure:</b>	129 mm Hg @ 20°C (68°F): THF		
<b>Specific Gravity:</b>	0.963 @23°C ( 73°F)			<b>Vapor Density:</b>	> 2.0 (Air = 1)		
<b>Solubility:</b>	Solvent portion soluble in water. Resin portion separates out.			<b>Other Data: Viscosity:</b>	Heavy bodied		
<b>Partition Coefficient n-octanol/water:</b>	Not Available						
<b>Auto-ignition Temperature:</b>	321°C (610°F) based on THF						
<b>Decomposition Temperature:</b>	Not Applicable						
<b>VOC Content:</b>	When applied as directed, per SCAQMD Rule 1168, Test Method 316A, VOC content is: < 510 g/l.						

**SECTION 10 - STABILITY AND REACTIVITY**

<b>Stability:</b>	Stable
<b>Hazardous decomposition products:</b>	None in normal use. When forced to burn, this product gives off oxides of carbon and smoke.
<b>Conditions to avoid:</b>	Keep away from heat, sparks, open flame and other ignition sources.
<b>Incompatible Materials:</b>	Oxidizers, strong acids and bases, amines, ammonia

**SECTION 11 - TOXICOLOGICAL INFORMATION**

Toxicity:	LD <sub>50</sub>	LC <sub>50</sub>	Target Organs
Tetrahydrofuran (THF)	Oral: 2842 mg/kg (rat)	Inhalation 3 hrs. 21,000 mg/m3 (rat)	STOT SE3
Methyl Ethyl Ketone (MEK)	Oral: 2737 mg/kg (rat), Dermal: 6480 mg/kg (rabbit)	Inhalation 8 hrs. 23,500 mg/m3 (rat)	STOT SE3
Cyclohexanone	Oral: 1535 mg/kg (rat), Dermal: 948 mg/kg (rabbit)	Inhalation 4 hrs. 8,000 PPM (rat)	

<u>Reproductive Effects</u>	<u>Teratogenicity</u>	<u>Mutagenicity</u>	<u>Embryotoxicity</u>	<u>Sensitization to Product</u>	<u>Synergistic Products</u>
Not Established	Not Established	Not Established	Not Established	Not Established	Not Established

**SECTION 12 - ECOLOGICAL INFORMATION**

<b>Ecotoxicity:</b>	None Known
<b>Mobility:</b>	In normal use, emission of volatile organic compounds (VOC's) to the air takes place, typically at a rate of < 510 g/l.
<b>Degradability:</b>	Not readily biodegradable
<b>Bioaccumulation:</b>	Minimal to none.

**SECTION 13 - WASTE DISPOSAL CONSIDERATIONS**

Follow local and national regulations. Consult disposal expert.



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**SECTION 14 - TRANSPORT INFORMATION**

**Proper Shipping Name:** Adhesives  
**Hazard Class:** 3  
**Secondary Risk:** None  
**Identification Number:** UN 1133  
**Packing Group:** PG II  
**Label Required:** Class 3 Flammable Liquid  
**Marine Pollutant:** NO

<b>EXCEPTION for Ground Shipping</b>	
<b>DOT Limited Quantity:</b>	Up to 5L per inner packaging, 30 kg gross weight per package.
<b>Consumer Commodity:</b>	Depending on packaging, these quantities may qualify under DOT as "ORM-D".

<b>TDG INFORMATION</b>	
<b>TDG CLASS:</b>	FLAMMABLE LIQUID 3
<b>SHIPPING NAME:</b>	ADHESIVES
<b>UN NUMBER/PACKING GROUP:</b>	UN 1133, PG II

**SECTION 15 - REGULATORY INFORMATION**

<b>Precautionary Label Information:</b>	Highly Flammable, Irritant	Ingredient Listings: USA TSCA, Europe EINECS, Canada DSL, Australia AICS, Korea ECL/TCCL, Japan MITI (ENCS)
<b>Symbols:</b>	F, Xi	
<b>Risk Phrases:</b>	R11: Highly flammable. R36/37: Irritating to eyes and respiratory system.	R66: Repeated exposure may cause skin dryness or cracking R67: Vapors may cause drowsiness and dizziness
<b>Safety Phrases:</b>	S2: Keep out of the reach of children S9: Keep container in a well-ventilated place. S16: Keep away from sources of ignition. S25: Avoid contact with eyes.	S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S33: Take precautionary measures against static discharges.

**SECTION 16 - OTHER INFORMATION**

<b>Specification Information:</b>		
<b>Department issuing data sheet:</b>	MPS ADHESIVES Quality Control	All ingredients are compliant with the requirements of the European
<b>E-mail address:</b>	<info@mpsadhesives.com>	Directive on RoHS (Restriction of Hazardous Substances).
<b>Training necessary:</b>	Yes, training in practices and procedures contained in product literature.	
<b>Reissue date / reason for reissue:</b>	4/7/2015 / Updated GHS Standard Format	
<b>Intended Use of Product:</b>	Solvent Cement for PVC Plastic Pipe	

This product is intended for use by skilled individuals at their own risk. The information contained herein is based on data considered accurate based on current state of knowledge and experience. However, no warranty is expressed or implied regarding the accuracy of this data or the results to be obtained from the use thereof.

